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GB A 2134774 GB A 2024000 GB 1576647
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US 4199823 US 3721984

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A3V
Selected US specifications from IPC sub-class
A42B

(54) Headgear

(57) A headgear suitable for wear by the pilot of an aircraft comprises: a helmet (11); a vizor (13); and two similar coupling arrangements (15), for connecting together the helmet (11) and the vizor (13), symmetrically disposed with respect to the fore and aft plane of symmetry (P-P) of the helmet (11) and vizor (13) and each comprising an arcuate track (19) fixed to the vizor (13) and having a centre of curvature contained in an axis (A-A) substantially perpendicular to the plane (P-P) and two projections (17) from the helmet (11) and co-operating with the track (19) so as to constrain the vizor (13) for angular movement relative to the helmet (11) about the axis (A-A).

Fig.1.

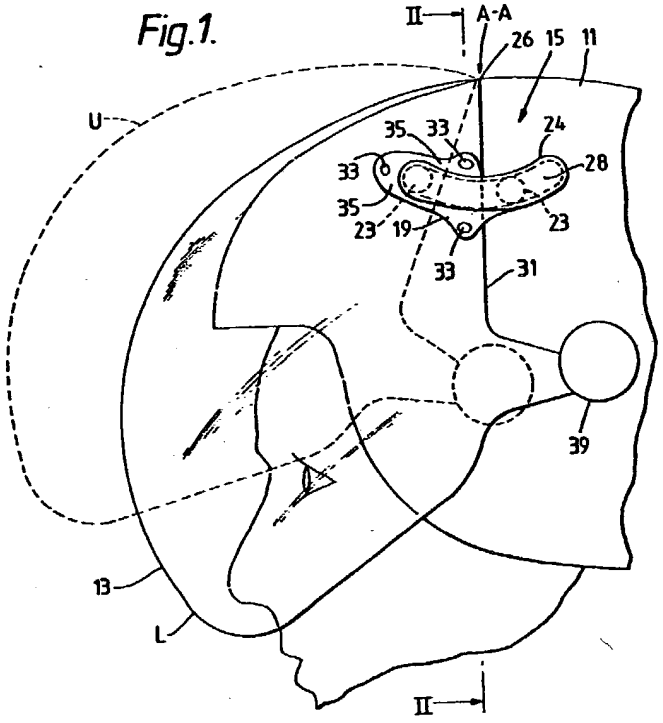
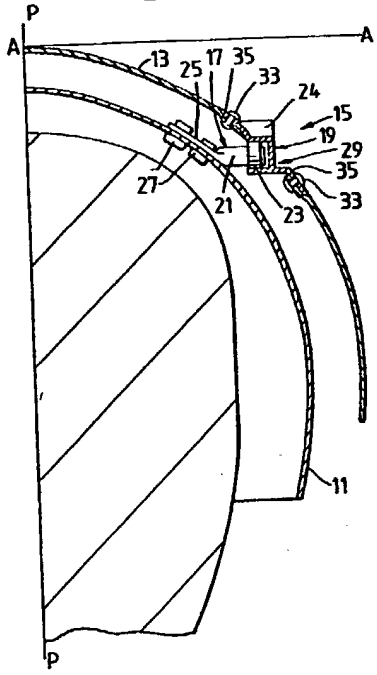


Fig.2.



The drawing(s) originally filed was (were) informal and the print here reproduced is taken from a later filed formal copy.

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Fig.1.

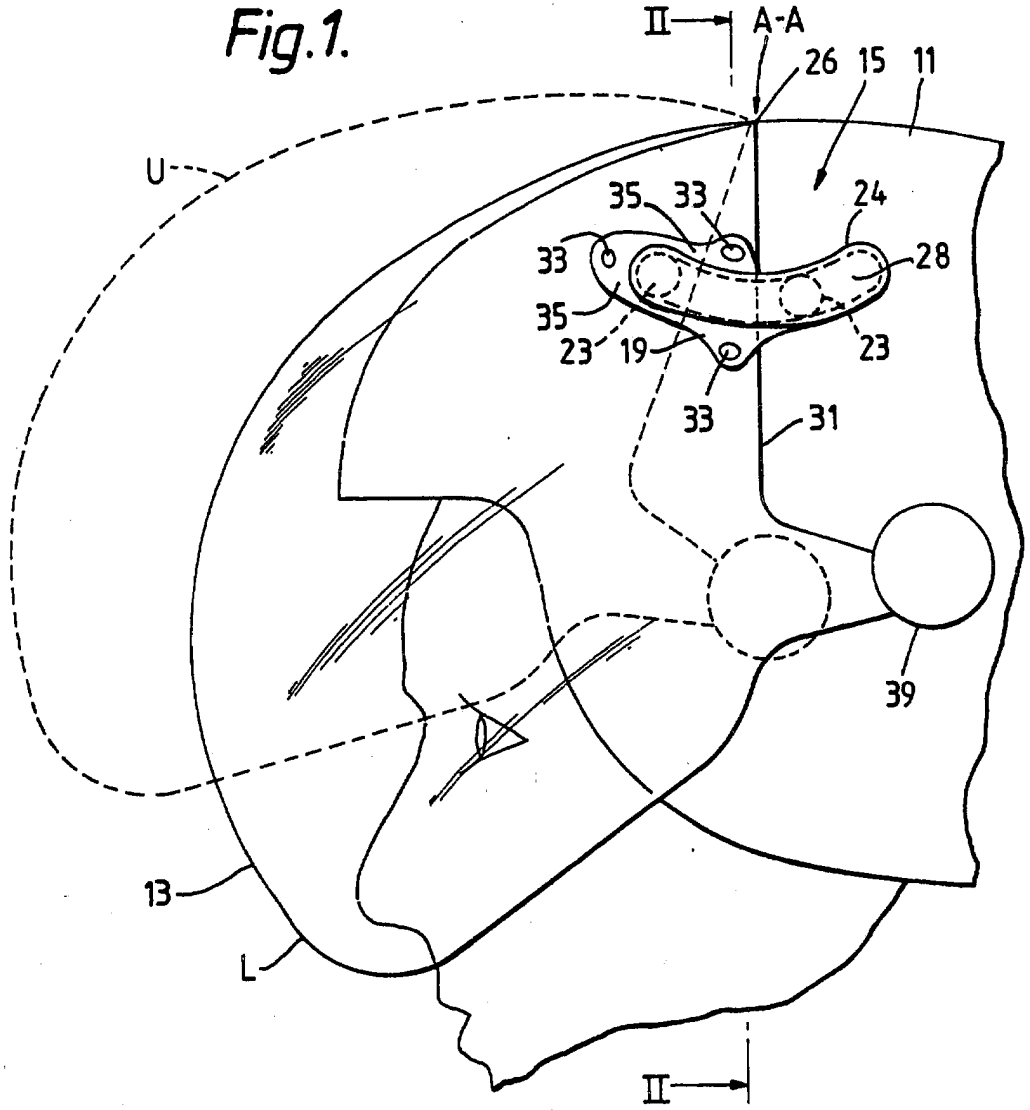
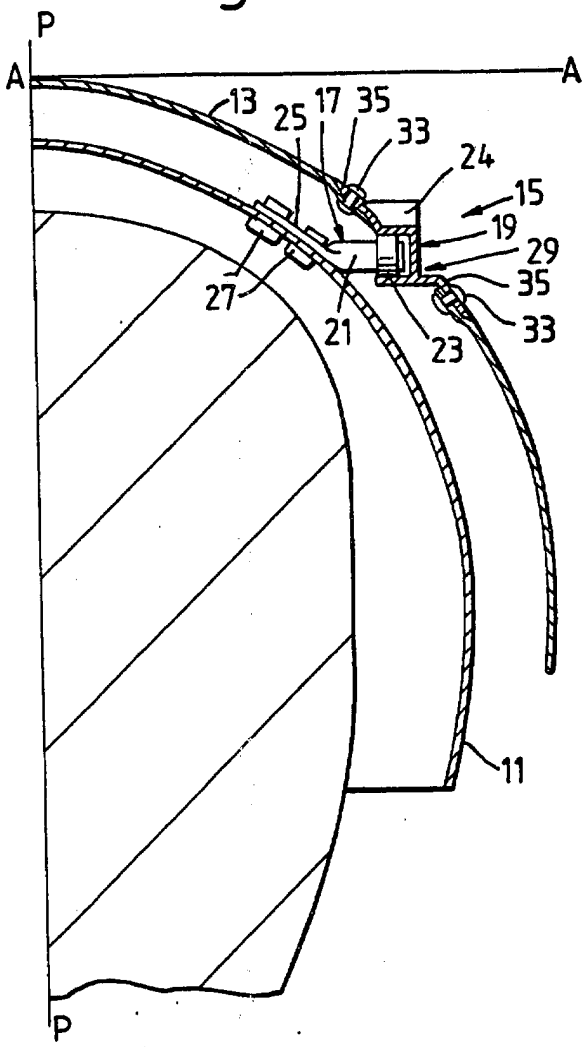


Fig.2.



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Headgear.

This invention relates to headgear, especially headgear suitable for wear by the pilot of an aircraft.

More particularly, the invention relates to such headgear having a vizor.

It is an object of the present invention to provide such headgear having a simple form of coupling arrangement for mounting the vizor on the headgear for angular movement relative thereto.

According to the present invention there is provided a headgear comprising: a helmet part; a vizor part; and first and second similar coupling arrangements, for connecting together the helmet part and the vizor part, symmetrically disposed with respect to the fore and aft plane of symmetry of the helmet and vizor parts and each comprising an arcuate track fixed to one of the said parts and having a centre of curvature contained in an axis transverse to the said fore and aft plane and at least two projections from the other of the said parts and co-operating with the said track so as to constrain the vizor part for angular movement relative to the helmet part about said transverse axis.

One headgear in accordance with the present invention will now be described, by way of example, with reference to the

accompanying drawings in which:

Figure 1 is a schematic side view of the headgear; and

Figure 2 is a half cross-section of the headgear on the line II-II in Figure 1.

Referring to the drawings, the headgear comprises a helmet part 11, a vizor part 13 and, connecting the two, two similar coupling arrangements 15.

The two coupling arrangements 15 are symmetrically disposed with respect to the fore and aft plane of symmetry P-P of the helmet and vizor parts 11,13, which, of course, is perpendicular to the plane of the paper in Figure 2 of the drawings.

Each coupling arrangement 15 comprises two projections 17 from the helmet part 11 and a track part 19 secured to the vizor part 13. Only one coupling arrangement 15 is, of course, visible in the drawings, the other coupling arrangement being located at the opposite side of the helmet and vizor parts 11, 13 to the visible coupling arrangement, symmetrically with respect to the plane P-P.

The projections 17 each comprise a spindle 21 and a roller 23 rotatable thereon. The spindles 21 are each supported by a carrier part 25 secured to the helmet part 11 by rivets, nuts and bolts or other fixings 27.

The track parts 19 each comprise an arcuate channel member 24, the centre of curvature of which is contained in an axis A-A perpendicular to the plane P-P and tangential at a point along its length with the upper aft edge 26 of the vizor part 13 located over about half of its length within a corresponding arcuate cutaway 29 in the visor part 13 and extending for the rest of its length beyond the rear edge 31 of the vizor part 13. The track parts 19 are secured to the vizor part 13 by rivets 33 through flange portions 35 of the member 24.

The rollers 23 and spindles 21 of each coupling arrangement extend into the channel 28 in the channel member 24 of that coupling arrangement so as to constrain the vizor part 13 for angular movement relative to the helmet part 11 about the axis A-A. The dimensions of the rollers 23 and the channel member 24 are such that each roller 23 rolls against one or other side of the channel 28 in the channel member 24 into which it extends on angular relative movement of the helmet and vizor parts 11,13. The amplitude of such angular movement

is determined by the length of the channel and is between a lowered or operating position and an upper or headgear donning/doffing position shown by the solid line L and the dotted line U respectively in Figure 1.

To constrain the vizor part 13 against movement with respect to the helmet part 11 when the vizor part is at its operating or at its donning/doffing position L or U, the heagear is provided with a two-position latch mechanism 39 at one side only of the headgear.

The headgear is, clearly, easily donned and doffed onto or from the user's head and is designed so as not to foul such apparatus as a night goggle (not shown) which may be supported on the helmet part so as to lie generally between the vizor part 13 and the headgear wearer's head.

CLAIMS.

1. A headgear comprising: a helmet part; a vizor part; and first and second similar coupling arrangements, for connecting together the helmet part and the vizor part, symmetrically disposed with respect to the fore and aft plane of symmetry of the helmet and vizor parts and each comprising an arcuate track fixed to one of the said parts and having a centre of curvature contained in an axis transverse to the said fore and aft plane and at least two projections from the other of the said parts and co-operating with the said track so as to constrain the vizor part for angular movement relative to the helmet part about said transverse axis.

2. A headgear according to Claim 1 wherein said transverse axis traverses said fore and aft plane at a point in the region of the upper aft part of the vizor part.

3. A headgear according to Claim 2 wherein said transverse axis is substantially tangential at a point along its length with the upper aft edge of the vizor part.

4. A headgear according to Claim 1 or Claim 2 or Claim 3 wherein said transverse axis is substantially perpendicular to said fore and aft plane.

5. A headgear according to any one of the preceding claims wherein in each said coupling arrangement said projections each comprise a spindle and a roller rotatable thereon and said track comprises a channel into which said rollers extend so as to roll against a side wall of the channel on angular relative movement of said helmet and vizor parts.

6. A headgear according to any one of the preceding claims wherein said one part is said visor part and said other part is said helmet part.

7. A headgear according to any one of the preceding claims further comprising a latch means for constraining relative angular movement of said helmet and vizor parts.

8. A headgear substantially as hereinbefore described with reference to the accompanying drawings.

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